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Short Communication

The first record of *Hemineura wittmeri* Badonnel, 1981 (Psocodea, Psocomorpha, Elipsocidae) from the Caucasus

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Abstract

The second psocid species of the genus *Hemineura* Tetens, 1891, namely *H. wittmeri* Badonnel, 1981, is recorded from the Caucasus region for the first time based on several female and male specimens collected in the Shida Kartli region of Georgia. Collecting data are given along with diagnostic illustrations of the preserved specimens.

Key words: Elipsocinae, Georgia, faunistics, *Hemineura*, new record, Psocoptera

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Hemineura Tetens, 1891, is the second most species-diverse Palaearctic genus in the subfamily Elipsocinae Kolbe, 1882, comprising nine species (*H. bigoti* Badonnel; 1970, *H. blascoi* Baz, 1994; *H. clunialis* Lienhard, 1995; *H. dispar* Tetens, 1891; *H. hispanica* (Enderlein, 1907); *H. sclerophallina* Lienhard, 1986; *H. trudiae* Lienhard & Halperin, 1988; *H. turanica* Vishnyakova *in* Vishnyakova & Kaplin, 1980; *H. wittmeri* Badonnel, 1981) distributed across the Arabian Peninsula, Mediterranean, Caucasus, Europe (including European Macaronesia), and Turkmenistan (Vishnyakova and Kaplin 1980; Lienhard 2016). These interesting psocids are known for their striking sexual dimorphism, having micropterous or apterous females (resembling those of *Mesopsocus* Kolbe, 1880 spp.) and macropterous males, generally found in autumn-winter (depending on the locality) on various types of vegetation. The reliable identification of more than half of *Hemineura* species by males is impossible due to the lack of proper identification keys. Several species reproduce asexually through thelytokous parthenogenesis (Lienhard, 1998), further highlighting the importance of females for studies.

The first and most recent documented occurrence of this genus in the fauna of Georgia was *H. hispanica* by Seropian et al. (2023), who also, based on the distributional data, estimated at least 14 barklice species from different genera still expected to be found in the country. On November 5, 2023, 14 females (one of them juv.) and five males (CaBOL-IDs 1009116–1009134) of *H. wittmeri* Badonnel, 1981 (Figs 1A-F), were manually collected by the second author in semi-arid shrublands of Gori on *Paliurus spina-christi* Miller, 1768 (N41.979802°, E44.078262°), along with several specimens of *Ectopsocopsis cryptomeriae* (Enderlein, 1907), preserved in 96% ethanol, and stored at the sci-

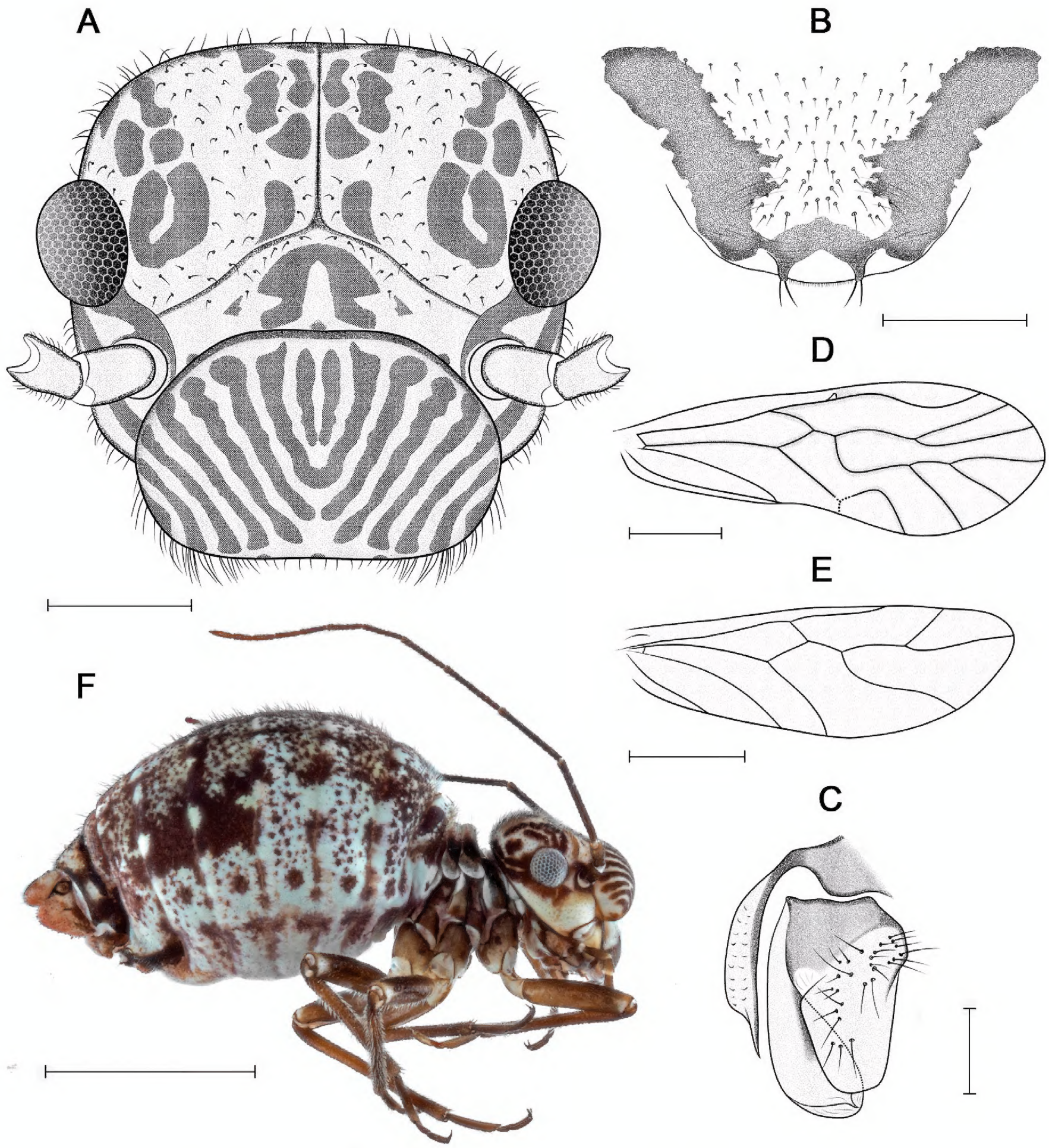

Figure 1. *Hemineura wittmeri* Badonnel, 1981. **A** – female, head, frontal view; **B** – subgenital plate, ventral view; **C** – gonapophyses; **D** – male, forewing; **E** – same, hindwing; **F** – female, general habitus, lateral view. Scale bars: 0.2 mm (**A**–**B**). 0.1 mm (**C**); 1 mm (**D**–**F**).

entific collections of Ilia State University (Georgia, Tbilisi). A photograph of one of the preserved female specimens (Fig. 1F) was taken using a Canon EOS 60D camera with a Canon MP-E 65mm f/2.8 1–5× Macro Photo Lens mounted on a Novoflex Castel-L Focusing Rack and equipped with a Canon Macro Twin Lite MT-26EX-RT. A digital image was prepared using Zerene Stacker image stacking software and Adobe Photoshop CS6 (version 13.0). Diagnostic drawings (Figs 1A–E) were made based on microscope photographs and using a Wacom CTH-690 Intuos Medium Pen and Touch Tablet with the programs Krita (version 2.9.7) and Photoshop CS6 (version 13.0).

Hemineura wittmeri was described from based on a single female from Saudi Arabia (Badonnel 1981), then consequently found in Israel (Lienhard 1998; sexually reproducing population) and the Canary Islands (Lienhard and Baz 2004; parthenogenetic population). The newly discovered bisexual population in Georgia is the first record of *H. wittmeri* in the Caucasus region, extending the known distribution range limits of this species ≈1500 km NE from the nearest finds in Israel.

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Additional information

Conflict of interest

The authors have declared that no competing interests exist.

Ethical statement

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Author contributions

AS led the writing and prepared diagnostic plate, NB collected the specimens.

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Data availability

All of the data that support the findings of this study are available in the main text or Supplementary Information.

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